UNITED STATES PATENT AND TRADEMARK OFFICE

ᴍᴺ

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/716,605 | 11/20/2003 | Max C. Knees | 200311038 | 7176 |

22879      7590      07/11/2007

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

| EXAMINER |
|---|
| KEEFER, MICHAEL E |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2154 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 07/11/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/716,605 | KNEES ET AL. |
| | Examiner | Art Unit | |
| | Michael E. Keefer | 2154 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>20 November 2003</u>.

2a)☐ This action is **FINAL**.    2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 November 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All  b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

1.      This Office Action is responsive to the Application filed 11/20/2003.

### *Oath/Declaration*

2.      The oath or declaration is defective.  A new oath or declaration in compliance

with 37 CFR 1.67(a) identifying this application by application number and filing date is

required.  See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It was not executed in accordance with either 37 CFR 1.66 or 1.68.

> Inventor Eric Pulsipher's signature is missing from the Delcaration.

### *Specification*

3.      The disclosure is objected to because of the following informalities:

The brief description of Figure 4 is missing from the Brief Description of the

Drawings section.

Appropriate correction is required.

### *Claim Objections*

4.      Claims 1-7, 8-10, and 11-17 are objected to because of the following

informalities:

Regarding **claim 1**, it is suggested that in line 3 the word --said-- be inserted after

the word "of" to improve the clarity of the claim.

Regarding **claim 2**, it is suggested that in line 2 the word "zone" be deleted and

replaced with the phrase --of said zones-- to improve the clarity of the claim.

Regarding **claim 3**, it is suggested that in line 2 the word --the-- be inserted after

the word "dispatching" to improve the clarity of the claim.

**Claim 4** is objected to as depending upon objected claim 1.

Regarding **claim 5**, it is suggested that in line 6 the word --said-- be inserted after the word "each" to improve the clarity of the claim.

It is suggested that in line 7 the word --the-- be inserted after the word "inserts" to improve the clarity of the claim.

It is suggested that in line 9 the word --said-- be inserted after the word "each" to improve the clarity of the claim.

It is suggested that in line 12 the word --said-- be inserted after the word "obtaining" to improve the clarity of the claim.

**Claims 6-7** are objected to as depending upon objected claims 1 and 5.

Regarding **claim 8**, it is suggested that in line 3 the word --said-- be inserted after the word "identifying" to improve the clarity of the claim.

**Claims 9-10** are objected to for being dependent upon objected claim 8.

Regarding **claim 11**, it is suggested that in line 4 the word --said-- be inserted after the word "identifying" to improve the clarity of the claim.

Regarding **claim 12**, it is suggested that in line 3 the word "zone" be deleted and replaced with the phrase --of the zones-- to improve the clarity of the claim.

**Claims 13-14** are objected to for being dependent upon objected claim 11.

Regarding **claim 15**, it is suggested that the word "table" in lines 7 and 8 be deleted and replaced with the word --file-- to improve the clarity of the claim.

It is suggested that in line 8 the word --said-- be inserted after the word "each" to improve the clarity of the claim.

It is suggested that in line 9 the word --the-- be inserted after the word "inserts" to improve the clarity of the claim.

It is suggested that in line 11 the word --said-- be inserted after the word "each" to improve the clarity of the claim.

**Claims 16-17** are objected to for depending from objected claims 11 and 15.

Appropriate correction is required.

### Claim Rejections - 35 USC § 101

5.        35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-17 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding **claim 11**, the "machine readable medium," in accordance with Applicant's specification, may be software per se. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture, or a composition of matter. Instead, it includes functional descriptive material. Functional descriptive material does not fall within a statutory category since it is clearly not a series of steps or acts to constitute a process, not a mechanical device or combination of mechanical devices to constitute a machine, not a tangible physical article or object which is some form of matter to be a product and constitute a manufacture, and not a composition of two or more substances to constitute a composition of matter.

**Claims 12-17**, which depend from claim 11 do not remedy the deficiencies

of claim 11 and thus are rejected for the same.

### Claim Rejections - 35 USC § 102

6.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.      Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Raab et

al. (US 5850397), hereafter Raab.

Regarding **claims 1, 8 and 11**, Raab discloses:

dividing the network into zones of network devices; (Raab divides the

network into "spheres" which are zones. (Abstract))

in a first zone of the network, identifying devices in the zone that have

SNMP(Simple Network Management Protocol) access; (Raab identifies at least

one SNMP-aware agent for each sphere, step 404)

collecting data from the identified devices; (step 408)

stitching the collected data into a topology of the network.(step 412)

Regarding **claims 2, 10 and 12 as applied to claims 1, 8 and 11**, Raab

discloses:

repeating the steps of identifying, collecting and stitching for each zone in the network.

(Step 410 repeats the process until all spheres are resolved.)

Regarding **claims 3, and 13, as applied to claims 1 and 11**, Raab discloses:

dispatching identified devices in the zone to agents; and collecting the data from the identified devices via the agents using the SNMP access. (the identified devices in each sphere are inherently assigned to a snmp agent from which the global agent retrieves topology data from. See Col. 6, as well as the definitions in col. 10 describing various SNMP agents that are available to handle individual devices.)

Regarding **claims 4 and 14 as applied to claims 1, 3, and 11**, Raab discloses: caching the collected data; and downloading the topology into a database. (the collected data is inherently cached as it is not possible to detect a change in topology without having the previous configuration.)

Regarding **claims 5 and 15 and as applied to claims 1 and 11**, Raab discloses:

a first module receiving a list of managed nodes in the network and publishing the list of managed nodes to a first file; (it is inherent that the list of nodes is a file; a list of nodes is generated during sphere determination as disclosed in Col. 6)

a second module reading the first file and inserting data from the first file into a returns portion of a first database invoking a third module upon each insertion of data from the first file into the returns portion of the first database, which inserts data from the returns portion of the first database into a processing portion of the first database; (Col. 6 discloses two "sets" or databases, one for discovered and unprossesed networks, and one for processed networks.)

invoking a fourth module upon each insertion of data into the processing portion of the first database, the fourth module identifying nodes corresponding to the inserted data to a dispatch portion of a second database; and (Col. 6 lines 39-56)

a details agent obtaining node identifications from the dispatch portion of the second database, performing queries to the nodes corresponding to the node identifications, and inserting information received in response to the queries into a returns portion of the second database. (Col. 6 lines 48-61)

Regarding **claims 6 and 16 and as applied to claims 1, 5, 11 and 15**, Raab discloses:

invoking a fifth module, which accesses the returns portion of the second database, computes a list of the zones, and dispatches valid nodes in the first zone to active agents via a dispatch portion of a third database; the agents collecting data from the valid nodes and returning the collected data to a returns portion of the third database.     (Col. 11, lines 30-56 describe how a particular node is assigned to a particular sphere agent (i.e. a dispatch portion of a third database))

Regarding **claims 7 and 17 and as applied to claims 1, 5-6, 11, and 15-16**, Raab discloses:

invoking a sixth module, which causes the collected data in the returns portion of the third database to be processed into discovery topology data of the network and then downloaded; invoking a seventh module, which clears the dispatch and returns portions of the third database and refreshes topology and layer databases and signals that topological analysis with respect to the zone has been completed. (It is disclosed that

after a sphere is completed its information is removed from the set of spheres that need

to be determined (Col. 9), and after the spheres are determined, the topology

determination and aggregation described in columns 9 and 10 take place.)

Regarding **claim 9, and as applied to claim 10**, Raab discloses:

a Graphical User Interface; and the system comprises means for caching data. (the

collected data is inherently cached as it is not possible to detect a change in topology

without having the previous configuration.)

8.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.      Claims 1, 8, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by

Goringe et al (US 2003/0043820), hereafter Goringe.

Regarding **claims 1, 8 and 11**, Raab discloses:

dividing the network into zones of network devices; (Goringe discloses

dividing a network into regions ([0009] lines 2-3)

in a first zone of the network, identifying devices in the zone that have

SNMP([0049] discloses identifying if the device being evaluated is capable of

SNMP (i.e. there is not a SNMP error. See lines 11-12.))

collecting data from the identified devices; (If the device successfully

supports SNMP collects information from the device, [0049] lines 12-19)

stitching the collected data into a topology of the network.(lines 9-11 of the

abstract))

## *Conclusion*

10.     The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

"An Algorithm for Automatic Topology Discovery of IP Networks" by Lin et al.

discloses a topology discovery algorithm for IP networks which includes

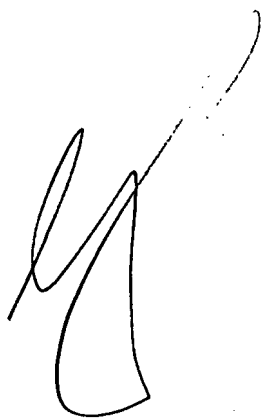discovering whether nodes are capable of supporting SNMP or not.

"Topology Discovery for Large Ethernet Networks" by Lowekamp et al. discloses

a method for finding accurate network topology information.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael E. Keefer whose telephone number is (571)

270-1591. The examiner can normally be reached on Monday-Thursday 7am-4:30pm,

second Fridays 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MEK 6/27/2007

NATHAN FLYNN
SUPERVISORY PATENT EXAMINER